WPM 2006 *plus*
WPM 2006 R
WPM 2007 *plus*
WPM 2007 R

Bedienungsanleitung

für den Benutzer

Operating instructions

for users

Manuel d'utilisation

à l'usage de l'utilisateur

Wärmepumpen-Manager

für Nieder-, Mittel- und Hochtemperatur–Wärmepumpen zum Heizen und Kühlen

Heat pump manager

for low, medium and high temperature heat pumps for heating and cooling

Gestionnaire de pompe à chaleur

pour pompes à chaleur à température basse, moyenne ou haute pour le chauffage et le rafraîchissement

Bestell-Nr. / Order no. / N⁰ de commande : 452114.66.48　　　　　**FD 8705**

(DE) Einstellung der Sprache

- MENUE-Taste für einige Sekunden gedrückt halten

- Auswahl des Menüpunktes *1 Einstellungen* mit den Pfeiltasten (⇑ und ⇓) und bestätigen durch Drücken der ENTER-Taste (↵)

- Auswahl des Untermenüpunktes *Sprache* mit den Pfeiltasten (⇑ und ⇓) und bestätigen durch Drücken der ENTER-Taste (↵) bis Cursor zum Einstellwert springt

- Gewünschte Sprache mit Pfeiltasten (⇑ und ⇓) einstellen

- Gewählte Sprache mit ENTER-Taste (↵) bestätigen oder durch die ESC-Taste verwerfen

(GB) How to set the desired language

- Hold MENUE button depressed for several seconds

- Select the *1 Einstellungen* menu item with the arrow buttons (⇑ and ⇓) and confirm by pressing the ENTER button (↵)

- Select the *Sprache* submenu item with the arrow buttons (⇑ and ⇓) and confirm by pressing the ENTER button (↵)

- Set the desired language with the arrow buttons (⇑ and ⇓)

- Confirm the selected language with the ENTER button (↵) or revoke with the ESC button

(FR) Réglage de la langue

- Tenir appuyée la touche MENU pendant quelques secondes

- Sélectionner l'option *1 Einstellungen* avec les touches pourvues de flèches (⇑ et ⇓) puis confirmer avec la touche ENTREE (↵)

- Sélectionner l'option *Sprache* avec les touches pourvues de flèches (⇑ et ⇓) puis confirmer avec la touche ENTREE (↵)

- Régler la langue souhaitée avec les touches pourvues de flèches (⇑ et ⇓)

- Confirmer la langue avec la touche ENTREE (↵) ou rejeter la sélection avec la touche ECHAP

(SI) Nastavení jazyka

- Stiskněte na několik sekund klávesu MENU.

- Zvolte bod menu *1 Einstellungen* pomocí kláves se šipkami (⇑ a ⇓) a potvrďte jej stisknutím klávesy ENTER (↵).

- Zvolte bod podmenu *Sprache* pomocí kláves se šipkami (⇑ a ⇓) a potvrďte jej stisknutím klávesy ENTER (↵), dokud nepřeskočí kurzor na nastavení hodnoty.

- Nastavte potřebné jazyky pomocí kláves se šipkami (⇑ a ⇓).

- Potvrďte zvolené jazyky klávesou ENTER (↵) nebo je zrušte klávesou ESC.

(IT) Impostare la lingua

- Tenere premuto per qualche secondo il pulsante MENUE

- Selezionare la voce di menu *1 Einstellungen* con i pulsanti a freccia (⇑ e ⇓), confermare premendo il pulsante INVIO (↵)

- Selezionare la voce sottomenu *Sprache* con i pulsanti a freccia (⇑ e ⇓), confermare premendo pulsante INVIO (↵) finché il cursore si troverà sul valore dell'impostazione

- Settare la lingua desiderata con i pulsanti a freccia (⇑ e ⇓)

- Con il pulsante INVIO (↵) confermare la lingua selezionata oppure annullare con il pulsante ESC.

(NL) De taal instellen

- De MENU-toets enkele seconden ingedrukt houden

- Het menupunt *1 Einstellungen* met de pijltjestoetsen (⇑ en ⇓) selecteren en bevestigen door middel van de ENTER-toets (↵)

- Het submenupunt *Sprache* met de pijltjestoetsen (⇑ en ⇓) selecteren en bevestigen door middel van de ENTER-toets (↵) tot de cursor naar de instellingswaarde springt

- De gewenste taal met de pijltjestoetsen (⇑ en ⇓) instellen

- De geselecteerde taal met de ENTER-toets (↵) bevestigen of door de ESC-toets afwijzen

(SE) Inställning av språk

- Håll MENY-tangenten intryckt några sekunder

- Välj menyposten *1 Einstellungen* med piltangenterna (⇑ och ⇓) och bekräfta genom att trycka på ENTER-tangenten (↵)

- Välj undermenyposten *Sprache* med piltangenterna (⇑ och ⇓) och bekräfta genom att trycka på ENTER-tangenten (↵) till dess att markören flyttar sig till "Inställningsvärde"

- Ställ in önskat språk med piltangenterna (⇑ och ⇓)

- Bekräfta det valda språket med ENTER-tangenten (↵) eller välj bort det med hjälp av ESC-tangenten

(CZ) Nastavitev jezika

- MENI -Tipko držimo nekaj sekund pritisnjeno.

- Izbiro tipk za meni *1 Einstellungen* s pomočjo tipk (⇑ in ⇓) in potrjujemo s pomočjo tipke ENTER- (↵).

- Pojem izbiramo s pomočjo tipk označenih s puščico (⇑ in ⇓) in potrjujemo s pomočjo tipke ENTER- (↵), dokler se puščica ne postavi na izbrano mesto.

- Želeni jezik uravnavamo s tipkama (⇑ in ⇓).

- Izbrani jezik s tipko ENTER- (↵) potrdimo ali s tipko ESC odklonimo.

(PL) Ustawienia języka

- Przycisk MENU wcisnąć i przytrzymać na kilka sekund

- Wybór punktu menu *1 Einstellungen* przy pomocy klawiszy strzałek (⇑ i ⇓) i potwierdzenie wciśnięciem klawisza ENTER (↵)

- Wybór punktu podmenu *Sprache* przy pomocy klawiszy strzałek (⇑ i ⇓) i potwierdzenie wciśnięciem klawisza ENTER (↵) aż kursor przeskoczy na wartość ustawianą

- Ustawić pożądany język klawiszami strzałek (⇑ i ⇓)

- Potwierdzić pożądany język klawiszem ENTER (↵) lub porzucić wciśnięciem klawisza ESC

(RC) 语言设置

- 按住菜单键几秒钟

- 菜单点项的选择 *"1 Einstellungen"* 调上下箭头键 (⇑ 和 ⇓)，然后按确认键(↵)确认

- 次级菜单点项的选择 *"Sprache"* 调上下箭头键(⇑ 和 ⇓)，然后按确认键(↵)直到光标跳到调整值

- 调上下箭头键(⇑ 和 ⇓)来设置所需语言

- 用确认键(↵)来确认所选语言，或者通过ESC-键拒绝对这个语言的选择。

(PT) Definição do idioma

- Manter a tecla MENUE premida durante alguns segundos

- Selecção do ponto do menu *1 Einstellungen* através das teclas de setas (⇑ e ⇓) e confirmar premindo a tecla ENTER (↵)

- Selecção do ponto do submenu *Sprache* das teclas de setas (⇑ e ⇓) e confirmar premindo a tecla ENTER (↵) até o cursor saltar para o valor de definição

- Definir o idioma pretendido através das teclas de setas (⇑ e ⇓)

- Confirmar o idioma seleccionado através da tecla ENTER (↵) ou cancelar através da tecla ESC

(ES) Seleccionar el idioma

- Mantener pulsada la tecla MENUE durante algunos segundos

- Seleccionar la opción *1 Einstellungen* con las teclas de flecha (⇑ y ⇓) y confirmar pulsando la tecla ENTER (↵)

- Seleccionar la subopción *Sprache* con las teclas de flecha (⇑ y ⇓) y confirmar pulsando la tecla ENTER (↵) hasta que el cursor salte al valor de ajuste

- Configurar el idioma deseado con las teclas de flecha (⇑ y ⇓)

- Confirmar el idioma elegido con la tecla ENTER (↵) o desechar la selección de idioma pulsando la tecla ESC

Table of Contents

1 General Information

For installation, operation and maintenance refer to the installation and operating instructions. This unit should only be installed and repaired by an experienced technician. Poorly carried out repairs can endanger the safety of the user. According to current regulations, the installation and operating instructions must always be available and should be handed to the technician working on the device for his/her information. Should ownership change, these installation and operating instructions must be passed on to the new user or owner. Do not connect the device if it is visibly damaged. In this event, ask the supplier for advice. Ensure that only original spare parts are used to prevent consequential damage. All environmentally-relevant requirements regarding the recovery, recycling and disposal of

materials and components should be observed in accordance with the applicable standards.

Regulations and Safety Information!

■ Any adjustments to the settings within the device may only be carried out by an authorised technician<.

■ The heat pump manager should only be operated in dry rooms with temperatures ranging between 0 °C and 35 °C. Ensure that no condensation forms on the device.

■ To ensure that the antifreeze function of the heat pump works properly, the heat pump manager must remain connected to the power supply and the flow must be maintained through the heat pump at all times.

2 Heat Pump Manager

The heat pump manager is essential for operation of air-to-water, brine-to-water and water-to-water heat pumps. It regulates a bivalent, monovalent or mono energy heating system and monitors the safety components in the refrigerating circuit. The heat pump manager is either installed in the heat pump casing or is delivered with the heat pump as a wall-mounted controller. It carries out regulation of both the heating system (radiators and circulation pump) and the heat source system.

Overview of functions

■ Convenient 6-button operation

■ Large and clear illuminated LC display with indicators for operating status and service information

■ Conforms with utility company requirements

■ Dynamic menu navigation, customised for the configured heat pump system

■ Remote control interface with identical menu navigation

■ Return temperature-controlled regulation of heating operation based on external temperature, adjustable fixed-setpoint or room temperature

■ Control of up to 3 heating circuits

■ Priority switching
– Cooling first
– DHW preparation first
– Heating first
– Swimming pool

■ Control of a 2nd heat generator
(oil or gas boiler, or immersion heater)

■ Control of a mixer for a 2nd heat generator (oil, gas, solid fuel boiler, or renewable heat source)

■ Special program for a 2nd heat generator to ensure minimum runtimes (oil boiler) or minimum heating times (main cylinder)

■ Control of a flange heater for targeted reheating of domestic hot water with adjustable time programs, and for thermal disinfection

■ Optional control of up to 5 circulating pumps

■ Defrost management system to minimise the energy required for defrosting using variable, self-adjusting defrosting cycle times

■ Compressor management system to ensure balanced loading of the compressors for heat pumps with two compressors

■ Operating hours counter for compressors, circulating pumps, 2nd heat generator and flange heater

■ Keyboard block, child lock

■ Alarm memory with time and date

■ Interface for communication via PC with optional display of heat pump parameters

■ Automatic program for targeted heat drying of screed floors and saving the start and finish times

3   Quick Reference Instructions

3.1   Selection of the Operating Mode

Select the desired operating mode by repeatedly pressing the modus button (text message). The operating mode will change 10 seconds after altering the setting (symbol changes on the display).

Cooling	❄	The system operates in cooling operation.
Summer	☂	Domestic hot water heating and swimming pool water heating only. Antifreeze (frost protection) is ensured.
Auto	⏲	Programmed raising and lowering times are automatically activated.
Vacation	⌂	Temperature reduction and domestic hot water block for an adjustable time period.
Party	👫	A programmed lowering of the heating characteristic curves is overridden.
Heat generator 2	⌇	Heat pump is blocked. Heat is generated by the 2nd heat generator.

3.2   Changing the Settings

- Hold the MENU button depressed for several seconds
- Select the desired menu item with the arrow buttons (⇑ and ⇓)
- Confirm by pressing the ENTER button (↵)
- Select the desired submenu item with the arrow buttons (⇑ and ⇓)

- Confirm with the ENTER button (↵) until cursor jumps to the setting
- Change the setting to the desired value with the arrow buttons (⇑ and ⇓)
- Confirm new value with the ENTER button (↵) or revoke with the ESC button

3.3   Settings and Operating Data

Menu for setting system-specific parameters (see *Chap. 8 on p. 7*). Dynamic menus hide non-essential settings.

- Time — Sets the time and activates an automatic summer/winter changeover.
- Operation — Various operating mode settings available (see *Chap. 3.2 on p. 3*)
- Heating circuit 1 — Settings for heating circuit 1
- Heating circuit 2 — Settings for heating circuit 2
- Heating circuit 3 — Settings for heating circuit 3
- Cooling — Settings for cooling operation
- Domestic hot water — Settings for DHW preparation
- Swimming pool — Settings for swimming pool heating
- Date — Sets the date (required for leap years only)
- Language — Sets the language desired for menu navigation

Heating characteristic curves (see *Chap. 6 on p. 5*)

The heating characteristic curve can be adjusted to individual temperature requirements using the Warmer/colder buttons on the main display. Increase or reduce the temperature with the ⇑ / ⇓ buttons. For heating circuit 2/3, make this setting in the menu **"Heating circuit 2/ Heating circuit 3"**.

DHW heating (see *Chap. 7 on p. 6*)

Besides the hot water temperature, a shut-off-time for the DHW heating can be set in the menu item **"Settings – Domestic hot water"**. This can be used to switch DHW preparation e.g. to the night hours. There is also the option of time-controlled reheating of domestic hot water using a flange heater.

Operating data menu (see *Chap. 8.2 on p. 10*)

Display of measured sensor values

History menu (see *Chap. 8.3 on p. 12*)

Display of runtimes and stored data (e.g. faults)

Displays (see *Chap. 9 on p. 13*)

- Display of the current operating status of the heat pump system
- Fault messages: (ESC button flashes)
  - HP fault — Indication of a fault in the heat pump. Inform your after-sales service.
  - Plant fault — Indication of a fault or an incorrect setting in the system. Inform your local technician.
  - Short-circ. or break — This can be caused by a breakage or a sensor which is short circuiting. Inform your local technician.

4 Operation

- The heat pump manager is operated using 6 keys: Esc, Modus, Menu, ⇓, ⇑, ⌐ . Different functions are assigned to these buttons according to the current display (Standard or Menu).
- The operating status of the heat pump and the heating system is indicated in plain text on a 4 x 20 character LC display (see *Chap. 9 on p. 13*).

- 6 different operating modes can be selected: Cooling, Summer, Auto, Party, Vacation, 2nd heat generator.
- The menu consists of 3 main levels: Settings, Operating data, History (see *Chap. 6 on p. 5*)
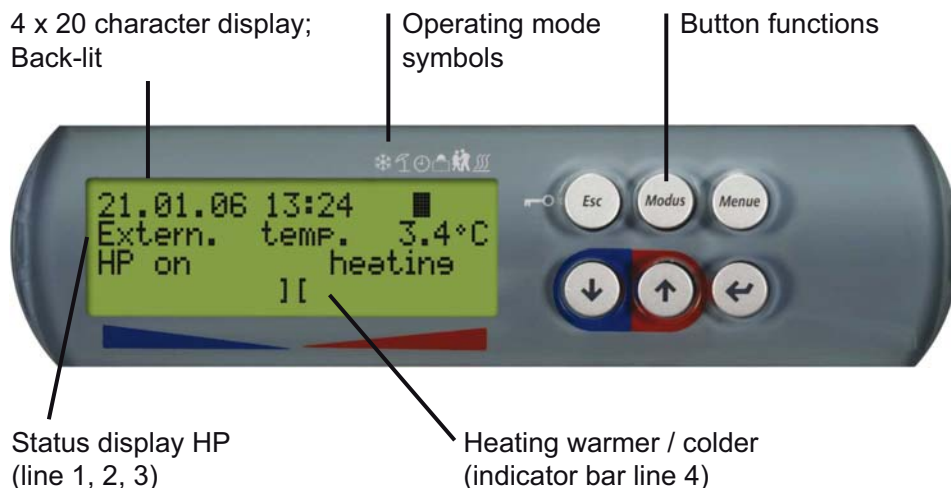
4 x 20 character display; Back-lit

Operating mode symbols

Button functions

Status display HP (line 1, 2, 3)

Heating warmer / colder (indicator bar line 4)

Fig. 4.1: Standard LC display - main display with operator buttons

ℹ️ **NOTE**

Contrast:

The display can be adjusted for contrast. Do this by depressing the buttons (MENU) and (⌐) at the same time until the adjustment process has been completed.

Increase the contrast by simultaneously pressing the (⇑) button. Reduce the contrast by pressing the (⇓) button.

ℹ️ **NOTE**

Keyboard block, child lock!

To prevent unintentional adjustment of the heat pump manager, press the button (Esc) for approx. 5 seconds until KEY BLOCK ACTIVE appears on the display. Cancel the keyboard block using the same procedure.

Button	Standard display (*Fig. 4.1 on p. 4*)	Change of setting (*Chap. 8 on p. 7*)
Esc	■ Activates or deactivates the keyboard block ■ Acknowledges a fault	■ Exits the menu and returns to the main display ■ Returns from a submenu ■ Exits a setting without saving changes
Operation	■ Selects the operating mode (see *Chap. 5 on p. 5*)	No action
Menu	■ Jumps to menu	No action
⇓	■ Shifts the heating curve downwards (colder)	■ Scrolls downwards between menu items on one level ■ Changes a setting in a downward direction
⇑	■ Shifts the heating curve upwards (warmer)	■ Scrolls upwards between menu items on one level ■ Changes a setting in an upwards direction
⌐	No action	■ Selects a setting in the corresponding menu item ■ Exits a setting and saves changes ■ Jumps to a submenu

**Tab. 4.1:** Operator button functions

5 Operating Modes

6 different operating modes can be selected using the button (Modus). There is a time delay between switching modes. The operating mode can be changed each time the button is pressed in the order shown below.

> **ℹ NOTE**
> Heat pump operation block
> The heat pump is blocked in the 2nd heat generator operating mode. Heating operation and DHW preparation in mono energy systems is carried out using electric heating elements. In the case of bivalent systems, the 2nd heat generator is used.

COOLING Selectable only when the cooling controller is connected (see Installation and Start-up)		The system operates in cooling operation. The individual control functions are active. This operating mode can only be activated if a cooling controller is connected to the heat pump manager and the cooling function has been enabled in the preconfiguration.
SUMMER		Only domestic hot water and swimming pool water are heated up in the SUMMER operating mode. Space heating is not activated. Antifreeze (frost protection) is ensured.
AUTO		The heat pump operates in automatic operation. Programmed lowering times, raising times and shut-off-times for heating and DHW heating are activated automatically. DHW heating, heating and swimming pool heating are activated according to priority. The heat pump and the 2nd heat generator are switched on or off as required.
VACATION (lower operation)		A lowering of the heating characteristic curves and a hot water block are activated in the VACATION operating mode. Both functions are independent of any relevant timings, but the lower values set for these functions still apply. The duration of the VACATION operating mode can be set in the menu **"1 Settings – Operation – Vacation mode"**. After this time period has elapsed, the system switches automatically back to automatic operation again.
PARTY (daytime operation)		A programmed lowering of the heating characteristic curves is overridden in the PARTY operating mode. The duration of the PARTY operating mode can be set in the menu **"1 Settings – Operation – Party mode"**. After this time period has elapsed, the system switches automatically back to automatic operation again.
2nd heat generator (HG2)		The heat pump is switched off in this operating mode and the entire heat supply is provided by the 2nd heat generator (HG2). This is the immersion heater in mono energy systems. In bivalent systems it is the oil or gas heating. Time programs and heating curve settings remain active.

6 Adjustment of Heating Operation

During start-up, the heating characteristic curve is adjusted to suit the building and local conditions. This heating characteristic curve can be adjusted to individual temperature requirements using the Warmer/Colder arrow buttons on the main display.

Increase the temperature with the ⇑ button. The indicator bar in the last line will move to the right.

Decrease the temperature with the ⇓ button. The indicator bar in the last line will move to the left.

For heating circuits 2/3, make this setting in the **"Heating circuit 2/3"** menu.

The set heating characteristic curves can be lowered or raised on a time-controlled basis. For example, in poorly insulated buildings the heating characteristic curve can be lowered, or raised before the shut-off time to prevent significant cooling of the heating surfaces.

If the raising and lowering operations overlap each other, the raising operation has priority.

> **ℹ NOTE**
> Energy-efficient operation
> For energy-efficient operation of the heat pump heating system, the temperature level to be generated by the heat pump should be as low as possible.
> In well-insulated buildings, constant heating operation without lowering times will normally result in lower energy costs. This is because power peaks with high flow temperatures are avoided and the same degree of comfort is attained at lower temperatures.
> Shut-off times can be compensated for by a temperature rise that begins 1 hour before the shut-off time takes effect.

7 DHW Heating

The heat pump manager automatically calculates the maximum possible hot water temperature in heat pump operation. The desired domestic hot water temperature can be set in the menu **"Settings – Domestic hot water – Hot water set temp"**.

Hot water temperature - HP maximum

To attain the highest possible heat pump ratio during DHW preparation, the controller automatically calculates the maximum possible hot water temperature in heat pump operation based on the current heat source temperature. The lower the heat source temperature (e.g. external temperature, brine temperature), the higher the attainable hot water temperature.

Hot water cylinder without flange heater

If the hot water set temperature exceeds the maximum attainable domestic hot water temperature in heat pump operation, DHW preparation is terminated once the so-called HP maximum temperature is reached.

Hot water cylinder with flange heater

If the hot water set temperature exceeds the maximum attainable hot water temperature in heat pump operation, DHW preparation with the heat pump is terminated once the so-called HP maximum temperature is reached, and the desired hot water temperature is attained by reheating using the flange heater.

ⓘ NOTE

Reheating with flange heater
After DHW preparation with the heat pump, the water can be further heated to higher temperatures if the system is provided with a flange heater. DHW heating does not take place again until the HP maximum temperature is undershot. This ensures that basic heating can be carried out by the heat pump.

7.1 Shut-Off Times for DHW Preparation

Besides the hot water temperature, shut-off-times for DHW heating can also be programmed in the menu item **"Settings – Domestic hot water – Hot water block"**. No DHW heating is carried out during this period.

If a sufficiently large cylinder is available, we recommend carrying out DHW heating or reheating during the night-time hours. This means that the more favourable low tariff periods normally available can be utilized.

7.2 Thermal Disinfection

In the menu item **"Settings – Domestic hot water – Therm. Disinfection"**, it is possible to carry out a thermal disinfection with hot water temperatures of up to 85 °C in bivalent systems or systems with hot water cylinders and integral flange heater. The thermal disinfection can be carried out for each day of the week. The start time is selectable.

8 Menu Structure

8.1 Settings

All user settings are made in the **"Settings"** menu item.

The following table shows not only the menu structure and explanations in the right-hand column, but also the corresponding setting ranges. Values in bold print indicate the factory settings.

You can access the settings menu by:
- Pressing the button (MENU) for approx. 5 seconds
- Confirming the settings menu item with the ENTER button.

Abbreviations:

HG2 = 2nd heat generator (e.g. boiler)

Settings	System-specific parameters	Setting range
Time	Menu for setting the time. An automatic changeover from daylight saving time (summer) to winter time can be selected.	International 24 h display
Operation	Level for setting operating modes	
Operating mode	Selects the operating mode It is also possible to make changes directly using the modus button.	Summer **Auto** Party Vacation HG2 Cooling
Party mode No. of hours	Duration of party mode in hours After the set period has elapsed, the system returns automatically back to automatic operation again.	0 to **4** to 72
Vacation mode No. of days	Duration of vacation mode in days After the set period has elapsed, the system returns automatically back to automatic operation again.	0 to **15** to 150
Heating circuit 1	Settings for heating circuit 1	
HC1 Reference room Room set temperature	Sets the desired room set temperature when room temperature regulation is selected	15.0°C to 20.0 °C to 30.0°C
HC1 Time program Lower	Settings to lower the heating characteristic curve of heating circuit 1	
HC1 Lower Time1: Time2:	Sets the time during which the temperature in heating circuit 1 is to be lowered	**00:00** to 23:59
HC1 Lower Lower value	Sets the temperature value by which the heating characteristic curve of heating circuit 1 is to be lowered when the temperature is lowered	**0K** to 19K
HC1 Lower MO to SU	For each day of the week, it is possible to select whether Time1, Time2, no time or both times are to be active when the temperature is lowered. Operations to lower the temperature that exceed a weekday are activated or deactivated at the end of each day accordingly.	N T1 T2 Y
HC1 Time program Raise	Settings to raise the heating characteristic curve of heating circuit 1	
HC1 Raise Time1: Time2:	Sets the time during which the temperature in heating circuit 1 is to be raised.	**00:00** to 23:59
HC1 Raise Raise value	Sets the temperature value by which the heating characteristic curve of heating circuit 1 is to be raised.	**0K** to 19K

English

Settings	System-specific parameters	Setting range
HC1 Raise **MO to SU**	For each day of the week, it is possible to select whether Time1, Time2, no time or both times are to be active when the temperature is raised. Operations to raise the temperature that exceed a week day are activated or deactivated at the end of each day accordingly.	N T1 T2 Y
Heating circuit 2/3	Settings for heating circuit 2/3	
HC2/3 **Colder Hotter**	Parallel shift of the set heating curve for heating circuit 2/3. By pressing the arrow buttons once, the heating curve is shifted by 1°C upwards (hotter) or downwards (colder).	Indicator bar
HC2/3 Time program **Lower**	Settings to lower the heating characteristic curve of heating circuit 2/3	
HC 2/3 lower **Time1:** **Time2:**	Sets the time during which the temperature in heating circuit 2/3 is to be lowered.	**00:00** to 23:59
HC 2/3 lower **Lower value**	Sets the temperature value by which the heating characteristic curve of heating circuit 2/3 is to be lowered when the temperature is lowered	**0K** to 19K
HC 2/3 lower **MO to SU**	For each day of the week, it is possible to select whether Time1, Time2, no time or both times are to be active when the temperature is lowered. Operations to lower the temperature that exceed a week day are activated or deactivated at the end of each day accordingly.	N T1 T2 Y
HC2/3 Time program **Raise**	All settings to raise the heating characteristic curve of heating circuit 2/3	
HC2/3 Raise **Time1:** **Time2:**	Sets the time during which the temperature in heating circuit 2/3 is to be raised.	**00:00** to 23:59
HC2/3 Raise **Raise value**	Sets the temperature value by which the heating characteristic curve of heating circuit 2/3 is to be raised when the temperature is raised.	**0K** to 19K
HC2/3 Raise **MO to SU**	For each day of the week, it is possible to select whether Time1, Time2, no time or both times are to be active when the temperature is raised. Operations to raise the temperature that exceed a week day are activated or deactivated at the end of each day accordingly.	N T1 T2 Y
Cooling	Settings for cooling operation	
Dynamic cooling **Set value (return)**	Sets the desired return set temperature when dynamic cooling is selected	10°C to **15°C** to 30°C
Silent cooling **Set value (room temp)**	Sets the room set temperature for silent cooling The actual value is measured by room climate control station 1	15.0°C to **20.0°C** to 30.0°C
Domestic hot water	Sets DHW preparation	
Domestic hot water **Hot water set temp.**	Sets the desired hot water temperature	30°C to **45 °C** to 85°C
Domestic hot water **Block**	Sets the time programs for hot water blocks	
Hot water block **Time1:** **Time2:**	Sets the times in which DHW preparation is blocked	**00:00** to 23:59
Hot water block **MO to SU**	For each day of the week, it is possible to select whether Time1, Time2, no time or both times are to be active when the temperature is lowered. Operations to lower the temperature that exceed a weekday are activated or deactivated at the end of each day accordingly.	N T1 T2 Y

Settings	System-specific parameters	Setting range
Therm. Disinfection	To carry out a thermal disinfection, the DHW is heated up once to the desired temperature. The heating period is terminated automatically when the set temperature is reached or after 4 hours at the latest.	
Therm. Disinfection Start:	Sets the start time for the thermal disinfection	**00:00** to 23:59
Therm. Disinfection Temperature	Sets the desired hot water temperature which is to be reached during thermal disinfection	60°C to **45 °C** to 85°C
Therm. Disinfection MO to SU	For each day of the week, it is possible to select whether thermal disinfection is desired at the set start time.	**N** Y
Domestic hot water Reset HP maximum	By setting Reset to "Yes", the maximum calculated hot water temperatures in HP operation are reset to a value of 65 °C. The setting is automatically reset to "No".	**No** Yes
Swimming pool	Sets the preparation of swimming pool water	
Swimming pool Block	Sets the time programs for swimming pool blocks	
Swimming pool block Time1: Time2:	Sets the times in which swimming pool water preparation is blocked	**00:00** to 23:59
Swimming pool block MO to SU	For each day of the week, it is possible to select whether Time1, Time2, no time or both times are to be active when the temperature is lowered. Operations to lower the temperature that exceed a week day are activated or deactivated at the end of each day accordingly.	N T1 T2 Y
Date Year Day Month Day	Sets the date, year, day, month and week day	
Language	The language for menu navigation can be selected from the available languages	**DEUTSCH** ENGLISH FRANCAIS ITALIANO NEDERLAND PORTUGUES POLSKY SVENSKA SLOVENSKO ESPANOL CESKY

English

8.2   Operating Data

All current operating statuses are displayed in the "Operating data" menu item.

You can access the operating data menu by:
- Pressing the button (MENU) for approx. 5 seconds

- Selecting the operating data menu item with the arrow buttons and confirming with the ENTER button

Depending on the system configuration, the following data can be queried in the **"Operating data"** menu:

Operating data	Display of sensor and system values	Display
External temperat.	The external temperature is used for calculating the return set temperature, for antifreeze functions and for defrosting	Always
Return set temp. Heating circuit 1	Displays the calculated return set temperature for heating circuit 1	Not with silent cooling, only with reversible HP
Return temp. Heating circuit 1	Displays the return temperature of heating circuit 1 measured on the sensor. This temperature is the controlled variable for heating circuit 1.	Always
Flow temperature Heat pump	Displays the flow temperature measured on the sensor. This temperature is used for antifreeze functions and for safeguarding defrosting.	Air HP or sensor connected
Set temp. Heating circuit 2	Displays the calculated set temperature for heating circuit 2	Heating circuit 2 Heating operation
Minimum temperature Heating circuit 2	Displays the minimum temperature possible with silent cooling, calculated from the dew point plus dew point distance	Cooling operation Silent cooling only, reversible HP or HC2
Temperature Heating circuit 2	Displays the temperature of heating circuit 2 measured on the sensor. This temperature is, among other things, the controlled variable for heating circuit 2.	HC2 or cooling operating with silent cooling only with reversible HP
Set temp. Heating circuit 3	Displays the calculated set temperature for heating circuit 3	Heating circuit 3 Heating operation
Temperature Heating circuit 3	Displays the temperature of heating circuit 3 measured on the sensor. This temperature is the controlled variable for heating circuit 3.	Heating circuit 3 Heating operation
Heating Request	Indicates if a request for heating has been made. Even if there is a request for swimming pool water, it is possible that the heat pump will not operate (e.g. because of the utility company shut-off time). "Heating system flushing" is displayed when the system is being flushed. An HP block combined with a sufficiently high cylinder temperature is indicated by "Bivalent-renewable".	Min. 1 heating circuit
Power stage	Indicates which heat generator is available to carry out the heating request 1: max. 1 compressors, 2: max. 2 compressors, 3: max. 2 compressors and one 2nd heat generator	Heating operation
Defrost end sensor	Sensor for determining the defrost end with hot gas defrosting	Air HP with hot gas defrosting
Temperature tank Renewable	Displays the temperature measured in the cylinder in bivalent-renewable systems	Bivalent-renewable
Return temperature Passive cooling	Displays the measured return temperature during cooling operation measured at the heat exchanger input	Passive cooling function Cooling operation
Flow temperature Passive cooling	Displays the measured flow temperature during cooling operation measured at the heat exchanger output	Cooling function passive

Operating data	Display of sensor and system values	Display
Antifreeze Cool Cooling	Displays the temperature measured on the "Antifreeze Cool" sensor. This temperature is used to safeguard the operating limits in cooling operation.	Reversible HP Cooling operation
Room temperature 1 Set value	Displays the current room set temperature with silent cooling.	Cooling function Silent cooling Cooling operation
Room temperature 1	Displays the temperature measured in the room in which room climate control station 1 is installed. This temperature is the controlled variable for silent cooling.	Cooling function Silent cooling or Reference room
Humidity room 1	Displays the humidity measured in the room in which room climate control station 1 is installed. This value is used for calculating the dew point with silent cooling.	Cooling function Silent cooling
Room temperature 2	Displays the temperature measured in the room in which room climate control station 2 is installed. This value is used for calculating the dew point with silent cooling.	Cooling function Silent cooling 2 room stations
Humidity room 2	Displays the actual humidity in the room in which room climate control station 2 is installed. This value is used for calculating the dew point with silent cooling.	Cooling function Silent cooling 2 room stations
Cooling Request	Indicates if a request for cooling has been made	Cooling function Cooling operation
Domestic hot water Set temperature	Displays the current domestic hot water set temperature	Domestic hot water Sensors
Hot water temp.	Displays the measured domestic hot water temperature. This temperature is the controlled variable for DHW preparation.	Domestic hot water Sensors
Domestic hot water Request	Indicates if a request for domestic hot water has been made. Even if there is a request for swimming pool water, it is possible that the heat pump will not operate (e.g. because of the utility company shut-off time). An HP block combined with a sufficiently high cylinder temperature is indicated by "Bivalent-renewable".	Domestic hot water
Swimming pool Request	Indicates if a request for swimming pool water has been made. Even if there is a request for swimming pool water, it is possible that the heat pump will not operate (e.g. because of the utility company shut-off time). An HP block combined with a sufficiently high cylinder temperature is indicated by "Bivalent-renewable".	Swimming pool
Flow temp. limit sensor	Displays the temperature measured at the heat source output or the refrigerating circuit output of the HP. This temperature serves to safeguard the lower operating limit.	BW or WW HP with integr.controller
Coding	Displays the heat pump type identified from the coding resistor.	Always
Heating software	Displays the heating controller software version including the boot and bios version, as well as the valid network address.	Always
Software cooling	Displays the cooling controller software version including the boot and bios version, as well as the valid network address.	Cooling function
Network heat/cool	Displays whether a cooling controller is available in the network (Contr. Cooling) and whether the network is operating correctly (Network O.K.).	Cooling function

ℹ️ NOTE

Heating request

A heating request is pending if the "Return set temperature" minus the "Hysteresis return temperature" is higher than the current measured "Return temperature".

The hot water temperature display shows which heat generators are used to process a hot water request.
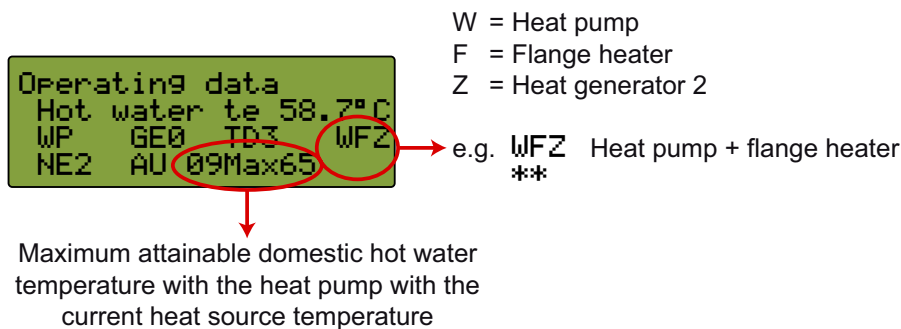

W = Heat pump
F = Flange heater
Z = Heat generator 2

e.g. WFZ Heat pump + flange heater
     **

Maximum attainable domestic hot water temperature with the heat pump with the current heat source temperature

Fig. 8.1: Hot water temperature display

8.3 History

The **"History""** menu can be used to query the runtimes of the compressor(s), circulating pumps and further components in the heat pump heating system.

You can access the history menu by:

■ Pressing the button (MENU) for approx. 5 seconds

■ Selecting the history menu item with the arrow buttons and confirming with the ENTER button

Depending on the system configuration, the following data is available:

History	Display of runtimes and stored data	Display
Compressor 1 Runtime	Total runtime of compressor 1	Always
Compressor 2 Runtime	Total runtime of compressor 2	2 Compressors
2nd heat generator Runtime	Total runtime of 2nd heat generator	Bivalent or mono energy
Primary pump Runtime	Total runtime of the brine circulating pump or well pump. The runtime is greater than the total of the compressor runtimes because of pump forerun and afterun.	BW or WW HP
Ventilator Runtime	Total runtime of the ventilator. The runtime is less than the total of the compressor runtimes because of the defrosting process (the ventilator is switched off during defrosting).	AW HP
Heat pump Runtime	Total runtime of the heat circulating pump	Always
Cooling Runtime	Runtime of the compressor in cooling operation	Reversible HP
Hot water pump Runtime	Total runtime of the hot water circulating pump	Domestic hot water
Swimming pool pump Runtime	Total runtime of the swimming pool circulating pump	Swimming pool
Immersion heater Runtime	Runtime during which the flange heater was additionally switched on for DHW preparation	Domestic hot water Sensors Immersion heater
Alarm memory No. 2	Displays the last fault which occurred with the date, time and cause	Always
Alarm memory No.1	Displays the second to the last fault which occurred with the date, time and cause	Always
Initial heating Start End	Displays the start and end of the last, fully completed initial heating program	Always
Screed drying Start End	Displays the start and end of the last, fully completed screed drying program	Always

9 Displays

The current operating status of the heat pump system can be read from the LC display.

9.1 Normal Operating Statuses

The display shows both normal operating statuses and those that are required by utility companies or due to safety functions of the heat pump. Only information about the relevant system configuration and HP type are shown on the display.

English

HP OFF	Heat pump does not operate because there is no request for heating pending.
HP on heating	Heat pump operates in heating operation
HP on cooling	Heat pump operates with active cooling
HP on hot water	Heat pump operates for DHW preparation and heats the hot water cylinder
HP on swim. pool	Heat pump operates and heats the swimming pool water
HP + HG2 heating	Heat pump and 2nd heat generator operate in heating operation
HP + HG2 swim. pool	Heat pump and 2nd heat generator operate and heat the swimming pool water
HP + HG2 hot water	Heat pump and 2nd heat generator operate in DHW heating operation and heat the hot water cylinder
Minimum pause time HP waiting	After expiry of the minimum pause time, the heat pump will start in order to meet the heating request that is pending. The minimum pause time protects the heat pump and can last up to 5 minutes.
Switch cycle block HP waiting	After expiry of the switch cycle block, the heat pump will start in order to meet the heating request that is pending. The switch cycle block is required by utility companies and can last up to 20 minutes. A maximum of 3 switch-ons per hour are permissible.
Line load HP waiting	After expiry of the switch-on delay for the line load, the heat pump will start in order to meet the heating request that is pending. The switch-on delay for the line load is required by utility companies after the voltage is recovered or after a utility block. It can last up to 200 seconds.
Utility block (EVU) HP waiting	The heat pump starts after expiry of the utility company shut-off time. The utility company shut-off time is specified by the utility company and lasts up to two hours depending on the utility company. Activation or deactivation is carried out by the utility company.
Ext. disable cont. HP waiting	The heat pump was switched off by an external utility blocking signal on input ID4.
Primary pump forerun HP waiting	The heat pump starts after completion of the primary pump forerun. This can last up to 3 minutes (safety function).
Low pressure limit HP waiting	The heat pump was switched off because the low pressure limit was reached. The heat pump will switch on again automatically. The 2nd heat generator (HG2) undertakes the supply of heat until the heat pump switches on again automatically.
Low pressure cut-off HP waiting	The heat pump was switched off because the low pressure limit was reached. The heat pump will switch on again automatically. The 2nd heat generator (HG2) undertakes the supply of heat until the heat pump switches on again automatically.
Lower operating lim. HP waiting	The heat pump was switched off because the lower operating limit was reached. The heat pump will switch on again automatically as soon as the heat source temperature has reached a sufficient level (safety function).
High press. protect HP OFF	The heat pump was switched off because the high pressure limit was reached. It will switch on again automatically (high pressure safety program).
HP block	The heat pump is blocked. The cause for the block is displayed using the following abbreviations: ■ **ET:** The external temperature is lower than -25 °C (or -15 °C) or higher than 35 °C. ■ **OM:** When the "Bivalent-alternative" operating mode is selected, the external temperature is lower than the limit temperature HG2. The 2nd heat generator is released. ■ **BR:** When the "Bivalent-regenerative" operating mode is selected, the temperature in the cylinder is high enough so that all pending requests (heating, hot water or swimming pool) can be processed by the cylinder. ■ **BF:** The current return flow temperature is lower than the set limit. ■ **DHW:** Domestic hot water reheating via the 2nd heat generator is active. ■ **SK:** A system control was activated in the special functions menu. It will be automatically deactivated after 24 hours. ■ **EVS** Utility block (EVU) or bridge A1 (ID3-X2) has not been inserted. ■ **Def:** With measure defrost active the usual lowering of the flow temperature during defrosting did not occur (Special functions measure defrost).

`HP blocked` `2nd heat generator`	The heat pump is switched off because the operating mode, 2nd heat generator (HG2), was selected. Heat generation is provided by the 2nd heat generator.
`Flow rate monitoring` `HP on`	Flow rate monitoring of the heating water takes place before the evaporator is defrosted. This applies to air-to-water heat pumps only. This process lasts a maximum of 4 minutes.
`Defrost` `HP on`	The heat pump defrosts the evaporator. This process lasts a maximum of 8 minutes.
`Upper operat. limit` `HP waiting`	The maximum flow temperature was overshot. Once the temperature drops, the HP will start again automatically (HT HP only).
`Delay` `Oper. mode cooling`	Switching to and from the cooling operating mode activates a time delay of 5 minutes. The heat pump remains switched off during this period.
`Antifreeze Cool` `Chiller waiting`	Despite a pending request, the chiller is unable to cool because antifreeze (frost protection) was activated. This state is ended automatically.
`Flow limit` `Chiller waiting`	Despite a pending request, the chiller is unable to cool because the current flow temperature is under the operating limit. This state is ended automatically.
`Dew point monitor` `Chiller waiting`	Despite a pending request, the chiller is unable to cool because the dew point monitor has been activated (external input). This state is ended automatically.
`Dew point` `Chiller waiting`	Despite a pending request, the chiller is unable to cool because the dew point calculated from the sensor values from the room climate control stations has been undershot. This state is ended automatically.
`Passive cooling` `HP OFF`	The heat pump operates in passive cooling and no requests are pending.

9.2 Fault Messages

Fault messages on the display fall into three broad categories:

- Heat pump fault
- System fault and
- Sensor fault

You only need to inform your after-sales service if there is a heat pump fault (HP fault). Make a note of the error message and the software version displayed in the operating data. After rectifying the problem, press the Esc button to acknowledge the fault.

The following messages may appear on the display.

`HP fault`	A heat pump fault indicates a defect in the heat pump. **Inform your local technician.** Details of the fault (display), the heat pump designation (type plate) and the software version of the heat pump manager (operating data) are required for rapid and precise troubleshooting. Depending on the system type, the following heat pump faults may appear on the display: - Low-pressure - Hot gas thermostat - Antifreeze - Compressor load
`Plant fault`	A plant fault indicates a defect or a false setting in the heat pump system. **Inform your local technician.** Details of the fault, the heat pump designation and the software version of the controller are required for rapid and precise troubleshooting. Depending on the system type, the following plant faults may appear on the display: - Motor protection primary - Flow rate well - High pressure - Temp. difference
`Short-circ. or break`	As with a system fault, this can be caused by a breakage or a sensor which is short circuiting. **Inform your local technician.** Details of the fault, the heat pump designation and the software version of the controller are required for rapid and precise troubleshooting. Depending on the system type, the following sensors may be defective: - Return flow sensor - Freeze protection sensor - Hot water sensor - Flow sensor - Sensor for heating circuit 2/3 - External sensor
`Sensor Contr 2`	This message will only be displayed with silent cooling active. It can have the following causes: - Break or sensor which is short-circuiting - Number of room climate control systems does not match the number of set room climate control stations. **Inform your local technician.**

> ℹ **NOTE**
> System fault
> In mono energy systems, the minimum return set temperature is set if a heat pump or system fault occurs. Antifreeze (frost protection) is ensured. By manually switching to the 2nd heat generator operating mode, the building is heated exclusively using the immersion heater.

Quick Reference Instructions

1. Key assignment

The heat pump manager is operated using 6 keys:

Modus *Briefly touch*		Change the operating mode by pushing the key once or repeatedly: The filled square in the upper right corner of the display indicates the current operating mode.

Symbol	Operating mode	Denotation
🕐	**Auto**	Fully automatic control of the entire heat pump heating system
	Vacation	Temperature lowering and hot water block for an adjustable time period (in days)
	Party	For overriding programmed temperature lowering for an adjustable time period (in hours)
≋	**Heat generator 2**	Heat pump blocking; Heating and domestic hot water preparation through the second heat source (e.g. oil heater) or the electric heating elements
	Summer	Domestic hot water and swimming pool water preparation; Heating operation blocked
❄	**Cooling**	Cooling operation cannot be activated on all heat pumps

When the key is pressed, the selected operating mode will be shown as text in the display.
The selected operating mode will be activated after approx. 10 seconds.

Menue	*Keep pressed for 2 seconds*	Jump to the menu to modify *Settings*.
ESC	*Briefly touch*	Jump back to a higher menu level.
	Keep pressed for 3 seconds	Jump back to the standard display.
	Keep pressed for 5 seconds	Activate and deactivate the keylock.
↵	*Briefly touch*	Confirm changes to settings (Enter key).
↑	*Briefly touch*	Press the key once to increase the heating temperature by 1 °C. The indicator bar will move to the right.
↓	*Briefly touch*	Press the key once to reduce the heating temperature by 1 °C. The indicator bar will move to the left.

2. Settings menus

How to adapt the settings to your requirements:

Menue	*Keep pressed for 2 seconds*	Jump to the menu to modify *Settings*.
↵	*Briefly touch*	Confirm the menu item *Settings* to go to the submenus.
↑ or ↓	*Briefly touch*	Jump to other setting options.
ESC	*Keep pressed for 1 second*	Jump back to a higher menu level.

Note: *These quick reference instructions do not replace the enclosed operating instructions, which can also be downloaded from the Internet.*

3. Domestic hot water preparation

How to set the domestic hot water temperature and the hot water block:

Menue	Keep pressed for 2 seconds	Jump to the menu to modify *Settings*.
↵	Briefly touch	Confirm the selection of the menu item *Settings*.
↓	Briefly touch	Press the key several times to select the menu item *Domestic hot water*.
↵	Briefly touch	Confirm selection of the menu item *Domestic hot water*.
↵	Briefly touch	Confirm selection of the menu item *Hot water set temp*.
↑ or ↓	Briefly touch	Increase or lower the hot water set temperature as required.
↵	Briefly touch	Confirm the set value.
↓	Briefly touch	Select the menu item *Hot water block*.
↵	Briefly touch	Confirm selection of the menu item *Hot water block*.
↵	Briefly touch	Jump to the setting to start the *Hot water block* (Time).
↑ or ↓	Briefly touch	Increase or lower the setting as required.
↵	Briefly touch repeatedly	Jump to the other settings until the cursor flashes in the upper corner. **Example:** *Time 1: 06:00-22:00* will block domestic hot water preparation from 6:00 am to 10:00 pm.
↓	Briefly touch	Select the menu item *Hot water block* (Mo-Su).
↵	Briefly touch repeatedly	Jump to the individual weekdays from Monday to Sunday.
↑ or ↓ / ↵	Briefly touch / Briefly touch	Select one or both shut-off times per weekday and confirm by pressing the Enter key: *N:* No shut-off time active *T1:* Time 1 active as shut-off time *T2:* Time 2 active as shut-off time *Y:* Time 1 and Time 2 active as shut-off times **Example:** *SA: N* and *SU: N* will prevent hot water block at weekends.

How to return to the standard screen and what to do if you have any problems making settings:

ESC	Keep pressed for 3 seconds	Jump back to the standard display.